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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/652,071	08/31/2000	Shane Ching-Feng Hu	DB000858-000	4375

24122 7590 09/04/2003

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EXAMINER	
CZEKAJ, DAVID J	

ART UNIT	PAPER NUMBER
2613	

DATE MAILED: 09/04/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/652,071	HU, SHANE CHING-FENG	
	Examiner	Art Unit	
	Dave Czekaj	2613	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-78* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-78* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 August 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

On page 4, line 10, "External source" is referred to as item 10. The examiner notes that the external source should be item 12.

On page 5, line 10, the reference to the "extra N+M states" is not found. The examiner notes that the "extra N+M states" is referring to the "extra N+M stages".

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 9, 22, 35, 48, 61, and 74 recite the limitation "said source information" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rao et al. (6041142), (hereinafter referred to as "Rao"), in view of Coombs et al. (5565998), (hereinafter referred to as "Coombs"), and Agarwal (5850264).

Regarding claims 1, 27, and 53, Rao discloses a method for processing data types in a video stream. This method comprises "calculating correlation values for each pseudo frame", "determining scene changes" (Rao: column 25, lines 65-67, wherein the correlation value is the field activity), and "analyzing correlation values and scene changes to identify the source of each frame" (Note Rao, figure 4B. Processor 490 and 480 use both correlations from 401 and scene change from register 470). However, this method lacks the forming of pseudo frames from fields in adjacent frames as claimed. Coombs and Agarwal teach that using pseudo frames reduces the amount of digital data that must be processed (Agarwal: column 1, lines 40-67, Coombs: note figure 1 where frame 2 AO/BE and frame 3 BO/CE are sources of pseudo frames). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the method described by Rao and add the pseudo frames taught by Coombs and Agarwal in order to obtain an apparatus that efficiently identifies data types in a video stream.

Regarding claims 14, 40, and 66, Rao discloses a method for processing data types in a video stream. This method comprises "calculating correlation values for each pseudo frame", "determining scene changes based on said correlation values" (Rao: column 25, lines 65-67, wherein the correlation value is the field activity), and "identifying frames and repeated fields based on correlation values and scene changes" (Note Rao, figure 4B. Processor 490 and 480 use both correlations from 401 and scene change from register 470). This method

also comprises "identifying the source of each frame based on said identification of frames and repeated fields" (Rao: column 18, lines 38-45, wherein the identification is done by examining the status registers). However, this method lacks the forming of pseudo frames from fields in adjacent frames as claimed. Coombs and Agarwal teach that using pseudo frames reduces the amount of digital data that must be processed (Agarwal: column 1, lines 40-67, Coombs: note figure 1 where frame 2 AO/BE and frame 3 BO/CE are sources of pseudo frames). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to take the method described by Rao and add the pseudo frames taught by Coombs and Agarwal in order to obtain an apparatus that efficiently identifies data types in a video stream.

Regarding claims 2-3, 15-16, 28-29, 41-42, 54-55, and 67-68, Agarwal discloses that "pseudo frames include interleaving each field with a field from a previous frame" or "with a previous field" (Coombs: figures 3A and 3B, column 3, lines 15-34).

Regarding claims 4, 17, 30, 43, 56, and 69, although not shown, calculating the correlation value could include the process of calculation the sum of absolute differences (Official Notice). Doing so would have been obvious to obtain a more precise correlation value.

Regarding claims 5-6, 18-19, 31-32, 44-45, 57-58, and 70-71, Coombs discloses that "determining scene changes includes comparing a correlation value for one pseudo frame to a correlation value for an adjacent pseudo frame"

(Coombs: column 7, lines 46-51, wherein the adjacent and previous frames are the surrounding 31 pairs).

Regarding claims 7, 33, and 59, Rao discloses "selecting a set of correlation values based on whether the frame represents a new scene and comparing said selected set of correlation values to one another to identify the source of each frame" (Rao: column 17, lines 50-67, column 18, lines 38-45, wherein the new scene is indicated by the scene cut. The comparing is done by recording the characteristics of the fields in the status registers. The status registers are then examined, or compared, to determine the source).

Regarding claims 8, 34, and 60, Rao discloses "transitioning a state machine through a series of states" (Rao: figure 4B).

Regarding claims 9, 22, 35, 48, 61, and 74, Agarwal discloses that "source information includes one of an interlaced field" (Agarwal: column 3, lines 19-22, wherein the interlaced field is the interleaved frame).

Regarding claims 10, 23, 36, 49, 62, and 75, Agarwal discloses "buffering in a delay buffer a plurality of frames" (Agarwal: figure 4, items 402 and 407).

Regarding claims 11-13, 24-26, 37-39, 50-52, 63-65, and 76-78, the output of Rao is equivalent as shown.

Regarding claims 20, 46, and 72, Rao discloses "selecting a set of correlation values based on whether the frame represents a new scene (Rao: column 17, lines 50-67, column 18, lines 38-45, wherein the new scene is indicated by the scene cut, and "comparing the selected set of correlation values

to one another to identify frames and repeated fields" (Note Rao, figure 4B. Processor 490 and 480 use both correlations from 401).

Regarding claims 21, 47, and 73, Rao discloses "transitioning a state machine through a series of states based on frames and repeated fields" (Rao: figure 4B).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US-6571255	03-27-03	Gonsalves et al.
US-5821991	10-13-98	Kwok, Wilson
US-5379063	01-03-95	Kishi et al.
US-6563550	05-13-03	Kahn et al.
US-5475438	12-12-95	Bretl, Wayne E.
US-6266349	07-24-01	Fukui et al.
US-5365273	11-15-94	Correa et al.
US-5619272	04-08-97	Salmon et al.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dave Czekaj whose telephone number is (703) 305-3418. The examiner can normally be reached on Monday - Friday 9 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (703) 305-4856. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600